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STATE DOCUMENTS

THE CENTER LINE

MONTANA HIGHWAY COMMISSION

Vol. III. No. 4

May, 1960

SIELBACH TO CITY OF HELENA

Another engineer has left us to accept added responsibility as City Engineer for the City of Helena. He is Fred Sielbach, Jr., who has been a Design Engineer in the Traffic Division.

HOW DO OUR BID PRICES COMPARE?

Many Montanans probably have wondered just how the bid prices on our highway projects compare with bids in our neighboring states. We find that the low bids submitted by our contractors compare very favorably with those submitted by bidders in other states.

The following table was prepared to compare low bids on several selected items.

650 WORKING OVERTIME

Since the installation of the IBM 650 Data Computer, shortly before Christmas, the 14 members of the IBM Section have been programming more and more work for the electronic computer. It calculates our payrolls; has enabled the Accounting Division to inaugurate a more efficient inventory system; checks contractors' bids for errors; summarizes average bid prices; projects design hourly volume for the future; calculates the Road Deficiency Report; and helps to figure estimates for the economic analysis of route studies.

Where the 650 really begins to pay for its keep is in the earthwork calculations for the Construction Division. (Continued on page two)

COMPARISON OF AVERAGE LOW BID PRICES FOR SELECTED CONSTRUCTION ITEMS
IN SEVERAL WESTERN STATES FOR 1959

(Prices given in Dollars and Cents)

ITEM DESCRIPTION	UNIT	Montans	No.Dakota	So.Dakota	Colorado	Utah	Nebraska	New Mexico	Arizona	Nevada	Oregon	Washington	Wyoming
(7) Unclassified Excavation	Cu.Yd.	0.27	0.18	(8) 0.21	0.32	0.35	0.19	0.32	0.52	0.40	(2) 0.30	0.42	0.26
Overhaul	Mt.Yd.	0.16	---	---	0.08	0.09	---	0.12	0.21	0.12	---	(Z) 0.32	---
Culvert Excavation	Cu.Yd.	1.75	0.67	---	2.32	---	1.00	1.58	---	1.93	2.32	2.11	1.72
(1) Structure Excavation	Cu.Yd.	6.53	4.37	(9) 5.50	5.40	(9) 2.08	11.72	4.25	(9) 1.68	1.93	5.26	2.75	2.50
Watering Embankment & Aggregate	M.Gal.	1.53	1.94	2.07	0.95	0.79	---	0.44	1.63	0.50	---	1.43	1.62
Aggregate - Base Course	Ton	0.81	---	0.67	1.00	0.77	3.59	0.90	1.23	---	1.27	1.30	0.89
Aggregate - Top Course	Ton	1.18	---	1.09	1.50	0.85	2.32	1.00	---	---	1.77	1.30	1.21
Aggregate - Seal Coat	Ton	5.31	6.04	5.13	5.00	4.21	6.30	4.46	5.70	3.48	---	3.46	6.06
Penetration Asphalt Cement	Ton	27.25	35.30	43.06	28.78	33.35	25.41	32.20	35.40	32.55	44.10	---	26.50
MC Cut Back Asphalt	Ton	37.10	---	---	40.75	38.50	---	41.25	44.40	38.86	48.93	46.50	34.00
RC Cut Back Asphalt	Ton	38.30	---	---	46.64	40.17	---	43.00	56.50	---	45.57	43.60	36.50
Emulsified Asphalt	Ton	38.10	35.30	44.00	---	---	---	---	47.75	41.89	46.40	---	---
Plant Mix Bituminous Surfacing	Ton	3.01	---	3.26	2.93	2.40	(6) 4.65	3.27	2.64	2.53	3.11	(Y) 7.95	2.98
(4) Portland Cement Concrete Pavement	Sq.Yd.	0.625	0.616	0.933	0.794	0.712	0.53	0.84	0.59	---	0.41	0.625	---
(3) Portland Cement Concrete	Cu.Yd.	61.18	59.16	49.96	49.77	69.16	49.85	52.09	44.35	66.19	60.86	63.86	65.62
Reinforcing Steel	Pound	0.15	0.14	0.13	0.12	0.15	0.13	0.13	0.13	0.13	0.12	0.11	0.14
Structural Steel	Pound	0.35	0.18	0.38	0.18	0.24	0.30	0.20	0.17	0.30	0.25	0.24	0.18
Treated Timber	M.B.M.	333.85	505.00	---	619.58	---	437.00	---	---	---	395.00	346.31	---
35' Treated Timber Piles	Each	90.00	94.85	93.60	88.68	124.25	109.37	135.45	---	---	42.00	75.25	100.80
(5) Wire Fence - Wood Posts	Rod	6.00	---	---	6.85	---	---	---	---	6.60	---	---	4.95
(5) Wire Fence - Metal Posts	Rod	4.95	---	---	6.38	---	---	---	---	7.43	5.40	---	---
48" Corrugated Metal Pipe - 10g	Lin.Ft.	29.00	18.92	---	20.00	24.98	14.31	16.72	11.81	15.00	19.50	20.00	22.00
48" Reinf. Concrete Pipe - cl.3	Lin.Ft.	27.49	21.34	18.84	18.00	22.81	16.00	---	---	---	---	---	20.60
120" Struct. Plate Pipe - 8g	Lin.Ft.	85.33	83.00	---	57.00	---	---	80.00	---	---	---	---	70.00

- (1) For Bridges, etc.
- (2) Includes Compaction
- (3) For Reinforced Structures
- (4) Average price per inch of thickness (8" thick = \$5.00 Sq.Yd.)
- (5) Combination - average 32" woven & 3 barbed wires
- (6) Asphaltic Concrete
- (7) Roadway
- (8) Includes Compaction and haul
- (9) Includes excavation for culverts
- (Z) Station yards beyond 600 ft.
- (Y) Only small quantity

It was very difficult to make a good comparison of very many items of work as performed in the several states. Those shown do not compare very well.

Take "unclassified excavation", for an example. Some states, in paying for this item, include overhaul; some include compaction. The various surfacing aggregates were very difficult almost impossible - to compare, because of varying specifications.

Anyone reviewing the table must take these circumstances into consideration. There probably are some errors in the table, because of incorrect interpretation of specifications and an absence of plans.

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Helena, Montana 59601

CONTRACTS AWARDED		Letting of April 20, 1960
PROJECT NO.	AWARDED TO	AMOUNT OF BID
F-189-(4)-U1 & F-232-(3)-U1 Nashua-Wolf Point Road Valley County	Richardson Construction Co. Miles City, Montana	\$411,081.48
F-189-(4)-U2 & F-232-(3)-U2 Nashua-Wolf Point Road Valley County (Bridge)	Schultz & Lindsay Construction Co. Fargo, North Dakota	\$ 70,745.20
S-132-(3) Billings-South Road Yellowstone County	WITHDRAWN	
S-179-(3) Harlem-Hogeland Road Blaine County	Baltrusch Construction Co. Havre, Montana	\$171,337.15
S-184-(3) Hammond-Ridgeway Road Carter County	WITHDRAWN	
S-248-(4) East of Blackfoot-Northerly (Meriwether Rte.) Glacier County	Peter Kiewit Sons' Co. Billings, Montana	\$282,759.90
S-266-(1) Browning-Babb (Duck Lake) Road Glacier County	Billings Construction Co. Billings, Montana	\$584,286.07
S-289-(8) & S-346-(5) Red Lodge-Columbus Road Carbon & Stillwater Co.	WITHDRAWN	
S-291-(4) Avon-Helmville Road Powell County	F. & S. Contracting Co. Butte, Montana	\$362,896.40
S-322-(5) Unit 1 Hardin-Sarpy Road Big Horn County (Bridge)	Husman Bros., Inc. Sheridan, Wyoming	\$ 47,223.90
S-322-(5) Unit 2 Hardin-Sarpy Road Big Horn County	Myrl Clark Yankton, S. Dak.	\$317,203.50
ROW-FHP-46-A-4 Targhee Pass-West Yellowstone Road Gallatin County (Fencing)	Bobleen & Duke Wilsall, Montana	\$ 4,118.80
ROW-S-291-(3) & ROW-F-FG 249-(8) Avon-Helmville Garrison-Helena Powell Co., (Fencg. & Gates)	T. & C. Fencing Fairfield, Montana	\$ 1,622.24
IN-90-9-(7)-508 AR No. 501-0051-05-012 Crow Agency-Hardin Road Big Horn County (Repair)	Cop Construction Co. Billings, Montana	\$ 13,500.00
TOTAL for Month		\$ 2,266,772.64
TOTAL for 1960		\$13,683,909.62

All projects awarded except No. S-179-(3) Blaine County, and No. S-266-(1), Glacier County which were awarded subject to clearance of Right-of-Way.

OVERTIME

(Continued from page one)

tion Division, which certainly beats the old method of 'dogging' each cross-section.

In April there were 167 working hours, but the 650 worked a total of 175 hours. Included in its work were quantities of earthwork on 217 miles of highway.

A typical example of a day's work for the computer is a 2.4 mile section of highway, involving 126.2 stations and 204 cross-sections. The work was received in the data computer at 11 a. m. on April 26. Key punch time was five hours, and 650 machine time was only 30 minutes, or five miles per hour! Total cost was as follows: Key punch rental, \$2.00; labor, \$9.00; IBM 650 rental, \$15.00; 407 printer, \$2.00; operator, \$2.50; total \$30.50.

SAM THOMPSON PROMOTED

Due to the heavy construction work-load in the Missoula Division, and the big job of repairing the spring break-up in that Division, Sam Thompson has been promoted to Division Construction Engineer in Missoula.

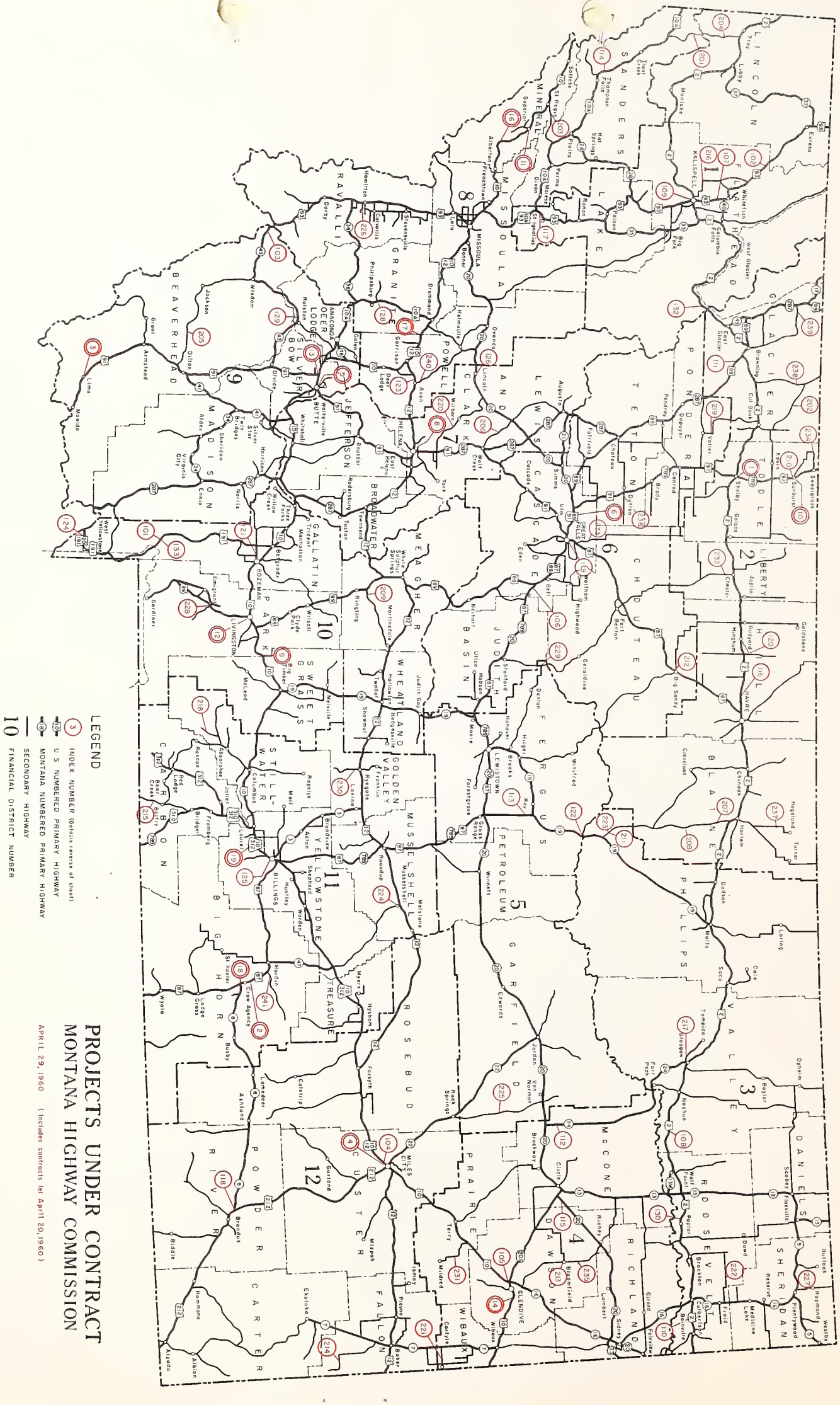
MONTANA AING LEADERS IN ROAD BUILDING

According to the Bureau of Public Roads, in a release dated April 26, Montana is progressing well with its highway program in comparison with other western states. According to the BPR report, Montana had completed 1,533.7 miles of Primary, Secondary, and Urban highways since July 1, 1956, and had another 460.1 miles under construction. Wyoming has completed 873.9, and had another 231.2 miles under way. Idaho has completed 896.1, with another 149.3 under construction. New Mexico has completed 953.9, and has another 161.2 under construction. Colorado has completed 1,009 miles and has 200.1 under construction. Utah has completed 638 miles and is building 116.1 at present. Oregon completed 912 miles and is working on another 243 miles. Washington completed 1,336.7 miles and is constructing an additional 233.2 miles.

As far as the Interstate System is concerned, Montana has completed 74.7 miles and 18 bridges, and has another 109.9 miles and 48 bridges under construction. Wyoming has finished completing 161.9 miles and 82 bridges, and has another 178.4 miles under way. New Mexico has completed 275.4 miles and has 96 bridges, and has another 47 miles and 43 bridges under construction. Idaho has completed 61.8 miles and 28 bridges, and has another 84.5 miles and 35 bridges being built. Utah has finished building 44.3 miles of Interstate and 19 bridges and has another 80.3 miles and 34 bridges under way. Colorado has finished building 207 miles and 138 bridges, while having another 70 miles and 60 bridges under construction.

The nation, as a whole, has seen the completion of 5,997 miles of Interstate Highway, and as of March 31, 4,805 additional miles on this road system were under construction. 4,951 bridges were completed, and 4,900 are presently under construction.

Map Index Number	Project Number	Probable Completion Date	LENGTH, TYPE OF CONSTRUCTION AND LOCATION
FEDERAL AID INTERSTATE PROJECTS			
1	I-IG-ING 15-8 (3) 351	9-1-60	5.6 miles (2.9 miles four lane divided) grading, drainage, surfacing, plant mix and seal coat oiling - Three prestressed concrete and steel beam overpasses, two 360 foot G. N. Ry. and U. S. 2, one 276 foot U. S. 91 - North Shelby Interchange (U. S. 91 - Shelby North)
2	IN 90-9 (5) 498 U 1 IN 90-9 (7) 508 U 1 I 90-9 (11) 498	6-1-60 5-30-60 5-30-60	11.6 miles (4.9 miles four lane divided) grading, drainage, surfacing, plant mix seal coat oiling and fencing (U. S. 87 - Crow Agency North)
3	I-IG-ING 15-3 (9) 0 I-IN 82-01 (6) U 1 I 94-4 (3) 134	5-30-60 7-31-61 7-31-61	17.1 miles plant mix bituminous and seal coat oiling (U. S. 91 - Monida thru Lima) 5.0 miles grading, drainage, surfacing, and bituminous surface treatment (U. S. 91 - Lima Northwest) One 268 foot steel girder overpass - Miles City West Interchange, One 290 foot riveted plate girder bridge - Tongue River, Two prestressed concrete beam overpasses, One 153 foot - County Road, and one 158 foot - U. S. 212 (U. S. 10 - Miles City West)
4	I 94-4 (5) 127 U 1	9-15-61	8.5 miles (0.8 miles four lane divided) grading, drainage, surfacing, Portland Cement paving, plant mix bituminous and seal coat oiling. One 214 foot prestressed concrete beam overpass - Radar Base Interchange. Three concrete slab junior grade separations. (U. S. 10 - Miles City West)
5	I 94-4 (5) 127 U 2 I 15-2 (9) 128	11-15-60 7-30-61	8.5 miles fencing (U. S. 10 - Miles City West) Five prestressed concrete beam overpasses. One 225 foot - Lexington Avenue, One 225 foot - Oregon Avenue, Dual 210 foot - Harrison Avenue Interchange, One 210 foot Sheridan Street (U. S. 91 - In Butte)
6	I 15-5 (9) 275 U 1 I 15-5 (9) 275 U 2	9-15-60 7-31-60	8.3 miles four lane divided, grading, drainage, surfacing, plant mix bituminous and seal coat oiling (US 91 - West of Great Falls) Three bridges, two 108 foot prestressed concrete beam - Winchester Interchange, one 219 foot steel girder - Vaughn Interchange, and two dual concrete slab junior grade separations (U. S. 91 - West of Great Falls)
8	I 15-5 (9) 275 U 3 I-IG-ING 15-4 (4) 184 U 1 I 117 (10) U 2	6-1-60 11-30-60 7-15-60	8.3 miles fencing (US 91 - West of Great Falls) 1607 foot total length dual steel and concrete overpasses - G.N. Ry. & N.P. Ry. (US 91 - Helena) 4.0 miles (1.6 miles four lane divided) grading, drainage, surfacing and plant mix oil (U. S. 10 - East of Livingston)
9	I 117 (10) U 2	7-15-60	4.2 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. One 313 foot steel girder - G.N. Ry. One 168 foot prestressed concrete beam - Sunburst Interchange - Overpasses (U. S. 91 - Sunburst North)
10	I-IG 15-8 (6) 379 U 1	7-30-61	4.2 miles fencing and cattleguards (US 91 - Sunburst North)
11	I-IG 15-B (6) 379 U 2 I 90-1 (5) 46 I 90-1 (6) 43 U 1	8-15-60 8-31-60 7-1-61	Two steel riveted plate girder bridges, one 621 foot, one 801 foot, Clark Fork (US 10 - North and South of Superior) 6.7 miles (1.2 miles four lane divided) grading, drainage, surfacing, plant mix bituminous and seal coat oiling. One concrete slab junior grade separation. (U. S. 10 - North and South of Superior)
12	I 90-1 (6) 43 U 2 I 90-1 (6) 43 U 3 I 90-1 (6) 43 U 4	7-31-60 10-1-60 9-30-61	Three prestressed concrete beam bridges, two 153 foot - Superior Interchange, one 168 foot - Cedar Creek (U. S. 10 - At Superior and East) 6.7 miles fencing and cattleguards (U. S. 10 - North and South of Superior)
13	I-ING 15-2 (8) 118	11-1-60	730 foot - Dual Structures - Riveted Plate Girder Bridges - Yellowstone River (U. S. 10 - South of Livingston)
14	I 94-6 (2) 216	7-1-60	4.2 miles (2.5 miles four lane divided) grading, drainage, surfacing, plant mix bituminous and seal coat oiling, three prestressed concrete bridges, one 210 foot Victor Interchange, one 599 foot and one 614 ft. B.A.&P. Ry. CMST P&P RY, NP RY, and Clark Fork (US 91 - West of Butte)
16	I 90-1 (4) 60 U 1 I 90-1 (7) 60 U 1 I 90-1 (11) 60	7-1-60 5-30-60 5-30-60	4.2 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 10 - East of Glendive) 5.0 miles (2.0 miles four lane) grading, drainage, surfacing, plant mix, seal coat oiling and fencing (U. S. 10 - Southeast of Superior) 5.0 miles signing and delineation (U. S. 10 - Southeast of Superior)
17	I 90-3 (3) 157 U 1 I 90-3 (3) 157 U 2 I 90-3 (3) 157 U 3	6-30-60 5-30-60 5-30-60	5.0 miles grass seeding (U. S. 10 - Southeast of Superior) 9.6 miles four lane, grading, drainage, surfacing, plant mix, seal coat oiling and fencing (U. S. 10 - East of Drummond) 9.6 miles grass seeding (U. S. 10 - East of Drummond)
18	I 90-9 (10) 498 U 1 I 90-8 (8) 438 U 1	6-1-60 9-1-60	9.6 miles signing and delineation (U. S. 10 - East of Drummond) 12.1 miles signing and delineation (U. S. 87 - Crow Agency North and South)
19	I 90-8 (8) 438 U 2	10-1-60	6.4 miles four lane grading, drainage, surfacing, plant mix bituminous and seal coat oiling. Same construction on frontage roads. Two 153 foot prestressed concrete beam overpasses - Beet Dump Separation (U. S. 10 - West of Billings) 6.4 miles fencing (U. S. 10 - West of Billings)
FEDERAL AID PRIMARY PROJECTS			
101	FHP 42-K2, L3	1960	8.9 miles grading, drainage, surfacing, bituminous surface treatment and two concrete girder bridges, one 122 foot - West Gallatin River, one 105 foot - Taylor Fork (U. S. 191 - South of Bozeman)
102	FHP 12-A4, B3, C2	1960	14.0 miles of surfacing, bituminous plant mix and seal coat oiling (U. S. 93 - Southeast of Eureka)
103	FHP 20-4	1960	7.8 miles (1.0 miles in Idaho) grading, drainage and 38 foot reinforced concrete girder bridge - Trail Creek (Montana 43 - west of Wisdom)
104	F 135 (17)	9-15-61	0.6 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 10 - Miles City West)
105	U 121 (3) & F 130 (15) U 1 F 235 (26) U 1 F 200 (8)	6-30-60 7-1-60 7-1-60 7-1-60	2.7 miles (2.3 miles four lane divided) grading, drainage, surfacing, plant mix and seal coat oiling - (U. S. 10 - Glendive Southwest) 5.3 miles grading, drainage, surfacing, plant mix and seal coat oiling (U. S. 87 - Southeast of Belt) 14.6 miles (7.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling) (7.3 miles plant mix bituminous and seal coat oiling) (U. S. 93 and Montana 40 - Whitefish - South)
108	F 189 4 U 1 & F 232 (3) U 1 F 189 (4) U 2 & F 232 (3) U 2 U 58 (23) U 257 (14) U 1, F 270 (7) U 1	7-30-61 10-31-60 10-1-60	8.2 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 - West of Wolf Point) One 205 foot prestressed concrete beam bridge - Little Porcupine Creek One 25 foot treated timber bridge - Indian Service Canal (U. S. 2 - West of Wolf Point) 2.2 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 & 93 - In Kalispell)
110	F 84 (27) F 84 (28) F-PG 273 (11)	7-1-61 7-1-61 7-1-61	8.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 - East of Culbertson) 5.5 miles plant mix bituminous and seal coat oiling (U. S. 2 - West of Culbertson East) 0.8 miles plant mix bituminous and seal coat oiling (Montana 16 - Culbertson South)
111	F 190 (3)	7-15-60	7.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 87 - Southeast of Browning)
112	F 315 (13) U 1 F 315 (13) U 2	9-30-60 9-30-60	8.3 miles grading and drainage (Montana 24 - Junction Montana 20 North) One 205 foot prestressed concrete beam bridge - Timber Creek (Montana - 24 - Junction Montana 20 North)
113	F 333 (23) U 1 F 333 (23) U 2	9-30-60 9-30-60	11.8 miles grading, drainage, and surfacing (North of Grass Range) One 92 foot prestressed concrete beam bridge (North of Grass Range)
114	F-PG-90-4) FH FHP 6-05 ROW-FHP 05	7-31-60 1960 7-30-60	949 foot steel and concrete bridge - Clark Fork (US 10 A relocation - West of Thompson Falls) 2.3 miles grading, drainage, surfacing and road mix bituminous oiling (US 10 A relocation - West of Thompson Falls) 2.0 miles grading (U. S. 10 A - Thompson Falls West)
115	F 391 (11) U 1 F 391 (11) U 2	9-1-60 7-31-60	9.1 miles grading and drainage (Montana 20 - East of Circle) Two 68 foot treated timber bridges - Buffalo Springs Creek and Cottonwood Creek (Montana 20 - East of Circle)
116	F-PG 95 (11) U 1	9-15-60	7.1 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 - West of Havre)
117	F 192 (8), F 194 (4), F 197 (6) & F 63 (7)	6-1-60	16.7 miles (14.5 miles grading, surfacing) (8.5 miles drainage), plant mix, seal coat oiling and traffic delineation (U. S. 10 A & 93 - North and South of St. Ignatus)
118	DF 198 (4), F 334 (15), U 2, & DF 334 (16)	6-1-60	20.4 miles grading, drainage, soil cement stabilization, plant mix and seal coat oiling (US 212 & Montana B - Broadus West)
119	U-F-PG 395 (4)	11-30-61	One 1126 foot steel riveted plate girder bridge - G. N. Ry. and Missouri River (U. S. 87 Bypass - Great Falls North)
120	F 132 (7)	9-1-60	12.7 miles (9.0 miles grading, drainage and surfacing) plant mix bituminous and seal coat oiling (U. S. 2 - Hingham East and West)
121	F 76 (6), F 203 (7)	8-31-60	13.1 miles (6.9 miles grading, drainage and surfacing) plant mix bituminous and seal coat oiling (U. S. 91 - Bozeman West and South)
122	F 333 (24)	7-31-60	19.9 miles surfacing, plant mix and seal coat oiling (Montana 19 - From 4.5 miles south Missouri River North)
123	F 249 (13)	7-30-60	1.2 miles grading, drainage and surfacing (U. S. 12 - East of Garrison)
124	ROW-F-PG 249 (8)	6-15-60	Resetting 93 rods of fencing (U. S. 2 - East of Garrison)
125	ROW FHP 46-A4 F-PG 228 (14)	6-15-60 6-1-60	1248 rods of fencing (U. S. 191 - West of West Yellowstone) 1711 foot prestressed concrete bridge - N.P., G.N., & C.B. & Q.R.R. (US 10 - Billings)
126	F 228 (18) F 267 (10)	6-1-60 7-10-60	0.3 miles grading, drainage, surfacing and bituminous surface treatment (U. S. 10 - Billings) 16.5 miles surfacing and plant mix bituminous oiling (Montana 20 - Lincoln East and West)
128	F 78 (7)	6-16-60	9.7 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 10 A - north of Philipsburg)
129	F 43 (14) U 1 F 43 (14) U 2	8-31-60 9-30-60	Two bridges, one 235 foot prestressed concrete beam and one 325 foot riveted steel girder - Big Hole River (Montana 43 - East and West of Ralston) 1.9 miles grading, drainage, surfacing and bituminous surface treatment of approaches to bridges on F 43 (14) U 1. (Montana 43 - East and West of Ralston)
130	F 84 (26)	6-15-60	9.8 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 - Poplar West)
132	FHP 13-15, J3	1960	4.0 miles grading, drainage and surfacing (U. S. 2 - Southwest of East Glacier)
133	FHP 42 J6, K3, L4	1960	16.8 miles plant mix bituminous surfacing and seal coat oiling (U. S. 191 - South of Bozeman)
FEDERAL AID SECONDARY PROJECTS			
201	FHP 5-A1, B	1960	9.1 miles grading and one 79 foot concrete slab bridge - Bull River (South of Troy)
202	S 185 (2)	6-15-60	32.1 miles surfacing, plant mix bituminous and seal coat oiling (North of Cut Bank)
203	S 216 (2)	6-30-60	3.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (St. Regis - Northeast)
204	S 38 (6)	7-15-60	5.9 miles grading, drainage, surfacing, plant mix and seal coat oiling (South of Troy)
205	S 35 (9)	9-30-60	5.0 miles grading, drainage and surfacing (West of Dillon)
206	S 228 (1)	7-1-60	17.8 miles grading, drainage, surfacing and bituminous surface treatment (Wolf Creek - Northwest)
207	S 187 (5) U 1	6-15-60	12.6 miles grading, drainage, surfacing and bituminous surface treatment (South of Harlem)
208	S 187 (5) U 1	6-1-60	14.0 miles grading, drainage, surfacing and bituminous surface treatment (South of Harlem)
209	S 14 (8)	8-31-60	11.9 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling - (Northeast of Ringling)
210	S 366 (5)	7-30-61	0.5 mile surfacing, plant mix bituminous and seal coat oiling (In Sunburst)
211	DS 187 (5)	5-30-60	6.4 miles grading, drainage and surfacing (South of Harlem)
212	S 219 (4)	9-15-60	8.0 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Big Sandy - West)
213	S 32 (9)	7-1-60	10.0 miles surfacing, plant mix bituminous and seal coat oiling (North and South of Bloomfield)
214	S 51 (5)	9-1-60	5.9 miles grading, drainage and surfacing (Southeast of Baker)
215	S 136 (1)	9-1-60	10.5 miles grading, drainage and surfacing (Belfry South)
216	S 157 (2)	7-1-60	10.4 miles plant mix bituminous surfacing and seal coat oiling (Kalispell West)
217	S 257 (3)	9-15-60	Three bridges - one 400 foot riveted plate girder, Milk River - one 120 foot concrete T beam, Cherry Creek - One 75 foot treated timber trestle (Glasgow West)
218	S 257 (4)	11-30-60	3.8 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Glasgow West)
219	S 175 (1)	7-1-60	6.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Southwest of Absarokee)
220	S 193 (3)	7-1-60	7.6 miles grading, drainage, surfacing, plant mix bituminous oiling (Valier Northwest)
221	S 2 (7)	8-1-60	7.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Wilbourn Southeast)
222	S 95 (3)	6-30-60	7.0 miles grading, drainage, surfacing and one 100 foot treated timber bridge - Beaver Creek (Carlyle)
223	S 200 (4)	10-15-60	2.5 miles grading, drainage, surfacing and bituminous surface treatment. One 110 foot concrete T beam bridge - Smoke Creek (West of Froid)
224	S 187 (7)	5-1-60	4.2 miles grading, drainage, and surfacing (South of Harlem)
225	S 236 (6) U 1	6-30-60	One 193 foot prestressed concrete beam bridge - Musselshell River (At Musselshell)
226	S 258 (2)	7-31-60	1.2 miles grading, drainage and one 225 foot prestressed concrete beam bridge - Little Dry Creek - (North of Rock Springs)
227	ROW S 227 (3)	5-30-60	3.7 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Hamilton Southeast)
228	S 227 (1)	6-30-60	953 rods of fencing (255 rods resetting and 698 rods new) (Hamilton Southeast)
229	S 313 (4)	7-1-60	15.6 miles plant mix bituminous and seal coat oiling (Plentywood North)
230	S 273 (2)	9-30-61	One 360 foot riveted plate girder bridge (Northeast of Emigrant)
231	S 307 (8)	8-15-60	4.2 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. Lengthen and widen existing treated timber bridge to 250 foot - Arrow Creek. (North of Stanford)
232	S 71 (3)	8-1-60	5.0 miles grading, drainage and surfacing. One 63 foot treated timber bridge - Fish Creek (Ryegate South)
233	S 201 (3)	9-1-60	4.9 miles grading, drainage and surfacing (North of Mildred)
234	S 303 (4)	9-15-60	5.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Chester South)
235	S 312 (2) S 336 (7)	10-1-60	5.6 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (North of Great Falls)
236	ROW S 312 (2) S 336 (2)	6-30-60	Resat fencing, cattleguards etc. (North of Great Falls)
237	S 366 (7)	11-1-60	6.3 miles grading, drainage and surfacing (West of Sweetgrass)
238	S 32 (10)	8-15-60	9.9 miles surfacing, plant mix bituminous and seal coat oiling (North of Bloomfield)
239	S 90 (2)	9-16-60	7.1 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Dutton East)
240	S 179 (3)	7-30-61	7.8 miles grading, drainage and surfacing (North of Harlem)
241	S 248 (4)	6-30-61	7.7 miles grading, drainage and surfacing (Northwest of Cut Bank)
242	S 266 (1)	8-30-61	9.8 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Northwest of Browning)
243	S 291 (4)	10-31-60	6.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Avon Northwesterly)
244	ROW S 291 (3)	6-15-60	Resetting 589 rods of fencing (Avon Northwesterly)
245	S 322 (5) U 1 S 322 (5) U 2	10-31-60 7-30-61	One 183 foot prestressed concrete beam bridge - Little Big Horn River (Hardin Northeasterly) 5.1 miles grading, drainage, surfacing plant mix bituminous and seal coat oiling (Hardin Northeasterly)



- LEGEND
- 3 INDEX NUMBER (locally reverse of sheet)
 - U.S. NUMBERED PRIMARY HIGHWAY
 - MONTANA NUMBERED PRIMARY HIGHWAY
 - SECONDARY HIGHWAY
 - 10 FINANCIAL DISTRICT NUMBER

PROJECTS UNDER CONTRACT
MONTANA HIGHWAY COMMISSION

APRIL 28, 1960 (includes contracts let April 20, 1960)



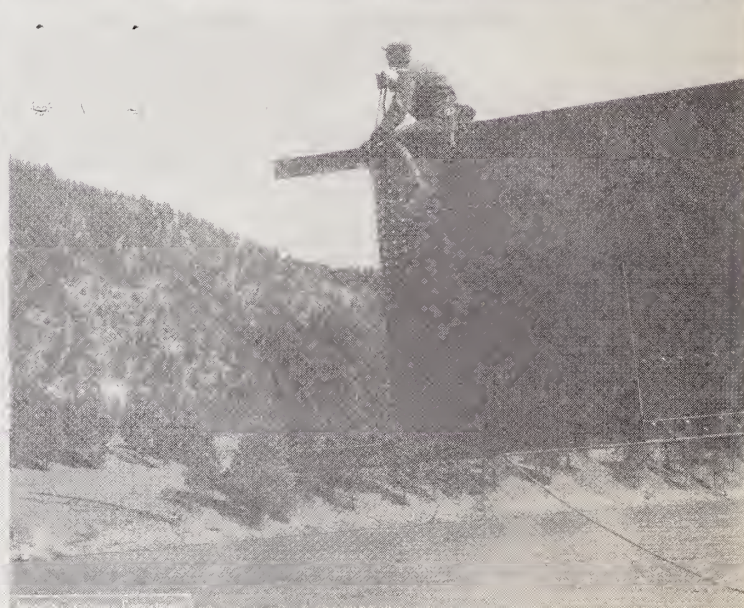
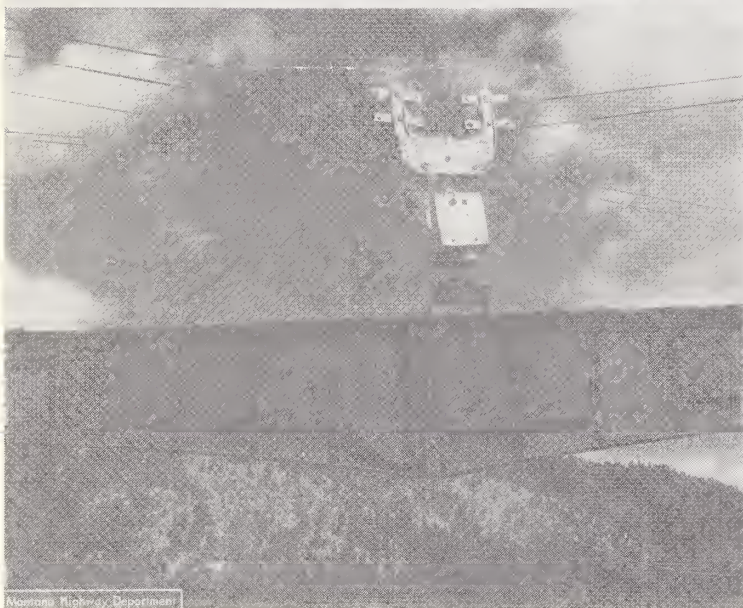
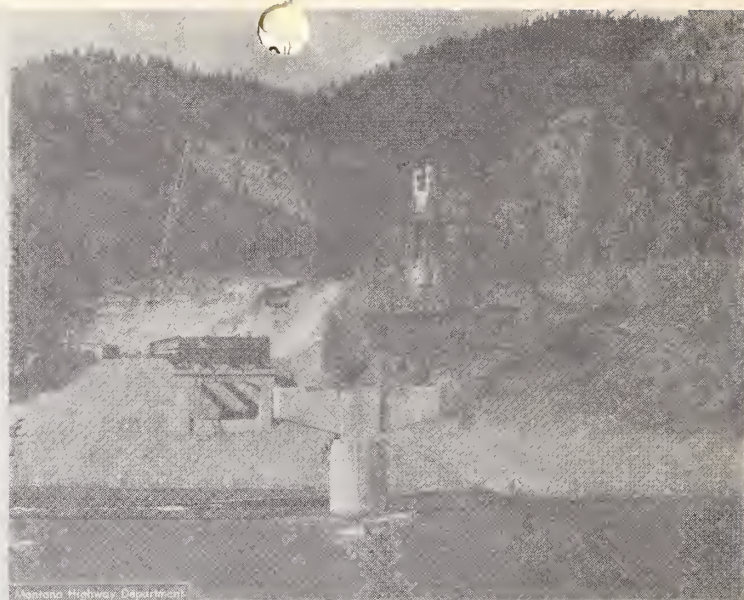
SEEDING AND MULCHING

Parker & Knez are shown here testing out their blower near Superior. The seed, water, straw and binder are all applied by the blower. This method of application seems to be working very well.



PLANNING CONFERENCE OF WASHO HELD IN HELENA

The Montana Highway Department was host to the planning departments of the WASHO states in Helena on April 25 and 26. Approximately 75 were in attendance from the western states, and from the Bureau of Public Roads. The information presented by the speakers was very timely and well received by the delegates. Montana's Howard Buswell is chairman of the group for 1960.



BRIDGE GIRDER PUT IN PLACE BY AERIAL METHOD

Chet Dreher, the highway photographer happened to be in the vicinity when Schye & Sullivan moved this bridge beam from a truck into position. The main girders, one of which is shown in this set of pictures are difficult to get into position, and these pictures show just how it was done. The girder weighs about 17 tons.

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